

WHAT IS CLAIMED IS:

## 1. A futon comprising:

a futon frame having a first end frame and a second end frame;

a pair of spaced-apart legs including front and rear legs disposed on said first end frame and said second end frame;

a seat platform and a back platform coupled to said futon frame to move between a seating position and a bed position;

a detent coupled to a force spreading mortise plate, said detent enables the spatial relationship between said seat platform and said back platform during engagement of said seat platform and said back platform during rotation is substantially the same as the spatial relationship of said seat platform and said back platform after rotation when said futon is placed in said seating position.

2. The futon as recited in claim 1 wherein said futon further includes a pair of spaced apart and parallel cross-members, having opposed terminations, extending between said first end frame and said second end frame, with said back platform and said seat platform lying in a common plane in said bed position so that said back platform lies against one of said pair of cross-members and said first platform lies against the remaining cross-member.

3. The futon as recited in claim 1 wherein said futon further includes a plurality of spaced-apart and parallel cross-members extending between said legs.

4. The futon as recited in claim 1 further including a cam and journal system comprising a plurality of cams and a plurality of journals disposed within said futon to provide means of interchanging of said futon between said seating position and said bed position and also to provide a means to lock said seat platform and said back platform in a desired position.

5. The futon as recited in claim 4 further including a first journal used in conjunction with a first cam with said first journal and said first cam disposed within said cam and journal system, a second journal used in conjunction with a second cam with said second journal and said second cam disposed within said cam and journal system, and a third journal used in conjunction with a third cam with said third journal and said third cam disposed within said cam and journal system.

6. The futon as recited in claim 2 wherein said pair of spaced apart and parallel cross-members further includes a rear cross-member and a front cross-member, and wherein said force spreading mortise plate is disposed on said rear cross-member.

7. The futon as recited in claim 1 wherein said detent comprises a resiliently biased spring.

8. The futon as recited in claim 1 wherein said detent enables the spatial relation between said seat platform and said back platform to be variable.

9. The futon as recited in claim 1 wherein said seat platform and said bed platform move in an arcuate manner with respect to each other.

10. The futon as recited in claim 1 wherein said futon further includes a plurality of detents.

11. The futon as recited in claim 4 wherein said cam and journal system is lined with a low friction surface.

12. The futon as recited in claim 4 wherein a cam of said plurality of cams is arcuate in shape.

13. The futon as recited in claim 4 wherein a cam of said plurality of cams comprises a throughway for ingress and egress of a journal of said plurality of journals.

14. The futon as recited in claim 6 wherein said futon further includes detents disposed at opposite ends of said rear cross-member.

15. A futon comprising:

a futon frame having a first end frame and a second end frame;

a pair of spaced-apart legs including front and rear legs disposed on said first end frame and said second end frame;

a seat platform and a back platform coupled to said futon frame to move between a seating position and a bed position;

a cam and journal system comprising a plurality of cams and a plurality of journals disposed within said futon to provide means of interchanging of said futon between said seating position and said bed position and also to provide a means to lock said seat platform and said back platform in a desired position; and

a detent coupled to a force spreading mortise plate, said detent enables the spatial relationship between said seat platform and said back platform during engagement of said seat platform and said back platform during rotation is substantially the same as the spatial relationship of said seat platform and said back platform after rotation when said futon is placed in said seating position.

16. The futon as recited in claim 15 wherein said futon further includes a pair of spaced apart and parallel cross-members, having opposed terminations, extending between said first end frame and said second end frame, with said back platform and said seat platform lying in a common plane in said bed position so that said back platform lies against one of said pair of cross-members and said first platform lies against the remaining cross-member.

17. The futon as recited in claim 15 wherein said futon further includes a plurality of spaced-apart and parallel cross-members extending between said legs.

18. The futon as recited in claim 15 further including a first journal used in conjunction with a first cam with said first journal and said first cam disposed within said cam and journal system, a second journal used in conjunction with a second cam with said second journal and said second cam disposed within said cam and journal system, and a third journal used in conjunction with a third cam with said third journal and said third cam disposed within said cam and journal system.

19. The futon as recited in claim 16 wherein said pair of spaced apart and parallel cross-members further includes a rear cross-member and a front cross-member, and wherein said force spreading mortise plate is disposed on said rear cross-member.

20. The futon as recited in claim 15 wherein said detent comprises a resiliently biased spring.

21. The futon as recited in claim 15 wherein said detent enables the spatial relation between said seat platform and said back platform to be variable.

22. The futon as recited in claim 15 wherein said seat platform and said bed platform move in an arcuate manner with respect to each other.

23. The futon as recited in claim 15 wherein said futon further includes a plurality of detents.

24. The futon as recited in claim 15 wherein said cam and journal system is lined with a low friction surface.

25. The futon as recited in claim 15 wherein a cam of said plurality of cams is arcuate in shape.

26. The futon as recited in claim 15 wherein a cam of said plurality of cams comprises a throughway for ingress and egress of a journal of said plurality of journals.

27. The futon as recited in claim 19 wherein said futon further includes detents disposed at opposite ends of said rear cross-member.